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PSEUDALBIORIX, A NEW GENUS OF IDEORONCIDAE (PSEUDOSCORPIONES, NEOBISIOIDEA) FROM CENTRAL AMERICA

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ABSTRACT. A new genus of Ideoroncidae, *Pseudalbiorix*, is described from Central America, and is found to consist of four species: the type species *P. reddelli* (Muchmore 1982), new combination from southern Mexico, *P. veracruzensis* (Hoff 1945), new combination from Belize, Guatemala and southern Mexico, and *P. muchmorei* Barba & Pérez, new species and *P. armasi* Barba & Pérez, new species from western Cuba. *Pseudalbiorix reddelli* and *P. veracruzensis* are transferred from the genus *Albiorix*. Members of this genus differ from all other ideoroncids principally in the morphology of the chelal externo-distal condyle. All post-embryonic stages of *P. reddelli* are described.

Keywords: Pseudoscorpions, Mexico, Cuba, taxonomy, morphology, new species, biospeleology, troglobite

The pseudoscorpion family Ideoroncidae consists of several genera found in disparate parts of the world (e.g., Harvey 1991; Mahnert 1984). The African fauna comprises three genera, *Negroroncus* Beier 1931, *Nannoroncus* Beier 1955 and *Afroroncus* Mahnert 1981, mostly restricted to the eastern half of the continent (Mahnert 1981), while the Asian fauna consists of the genera *Dhanus* Chamberlin 1930, *Shravana* Chamberlin 1930 and *Nhatrangia* Redikorzev 1938. The family is represented in the Americas by another three genera, *Ideoroncus* Balzan 1887, *Albiorix* Chamberlin 1930 and *Typhloroncus* Muchmore 1979 where a total of 30 species have thus far been named. The majority of American ideoroncid species are found in epigean habitats but some, such as *Ideoroncus cavicola* Mahnert 2001 from Brazil, the four Mexican species of *Typhloroncus*, and several species of *Albiorix*, are restricted to caves.

During research into the ideoroncid fauna of Central America, we have independently recognized the presence of some species that could not be placed within a pre-existing genus. One of these, *Albiorix reddelli* Muchmore 1982, was reluctantly included in *Albiorix* by Muchmore (1982) and Mahnert (1984), but a satisfactory placement could not be found at the time. Our discovery of a further three species, including *A. veracruzensis* Hoff 1945, from various localities across Central America that share important morphological features with *A. reddelli* has enabled us to conclude that this group of species should be recognized as a distinct genus, to which we apply the name *Pseudalbiorix*. The aims of the present paper are to describe the new ge-

nus, to provide descriptions of all four species based upon the abundant new material available to us, and to name two new species of *Pseudalbiorix* from Cuba, including the sole troglobitic species of the genus.

The specimens examined during this study are deposited in the American Museum of Natural History, New York (AMNH), the arachnological collection of Instituto de Ecología y Sistemática (CZACC) of the Ministry of Science, Technology and Environmental of Cuba, the Biospeleological collection of the Cuban Speleological Society, La Habana (ColBK), the California Academy of Sciences, San Francisco (CAS), the Florida State Collection of Arthropods, Gainesville, Florida (FSCA), and the Western Australian Museum, Perth (WAM). All specimens were measured with a micrometer eyepiece on a compound microscope, as described by Chamberlin (1931) and Harvey (1987). Morphological terminology mostly follows Chamberlin (1931) and Harvey (1992).

The maps were produced with the computer program ArcView 3.2 after the relevant locality data were stored in an Access database. Coordinates were obtained from various sources, including the GeoNet Names Server (http://earth-info.nga.mil/gns/html/) produced by the National Geospatial-Intelligence Agency. Recently collected specimens were usually provided with GPS coordinates taken at the collecting site. The spellings of the Mexican place names follow Reddell (1981).

SYSTEMATICS

Family Ideoroncidae Chamberlin 1930

Pseudalbiorix Harvey, Barba, Muchmore & Pérez, new genus

Type species.—*Albiorix reddelli* Muchmore 1982.

Other species.—*Albiorix veracruzensis* Hoff 1945, *P. muchmorei* Barba & Pérez, new species and *P. armasi* Barba & Pérez, new species.

Etymology.—The name *Pseudalbiorix* refers to the morphological similarity that this genus bears to *Albiorix*. The gender is masculine, following the gender applied to the name *Albiorix* by Chamberlin (1930). Although not stated by Chamberlin (1930), the name was presumably derived from the Celtic god Albiorix, who was worshipped in ancient Gaul and is often thought to be equivalent to Teutates, and sometimes known as Caturix (Lindemans 2005).

Diagnosis.—*Pseudalbiorix* can be distinguished from all other ideoroncid genera by the enlarged and bifurcate condyle on the externo-distal margin of the chelal hand (Figs. 10, 31). In all other ideoroncid and, indeed, neobisioid genera (e.g., Figs. 4–7), this condyle is small and rounded.

Pseudalbiorix can be further separated from the other recognized genera of Ideoroncidae as follows: from the American genus *Albiorix* by the lack of a divided arolium; from the American genus *Ideoroncus* by the presence of 4 setae on the anterior margin of the carapace (6 setae in *Ideoroncus*) and the position of trichobothrium *st* which is situated slightly ventral to the level of *sb* in *Ideoroncus* but is not ventrally displaced in *Pseudalbiorix* (or any other ideoroncid); from the American genus *Typhloroncus* by the long arolium, the presence of eyes and by the slightly lower number of trichobothria (30 in *Pseudalbiorix* and 32 or 33 in *Typhloroncus*); from the Asian genera *Dhanus*, *Shravana* and *Nhatrangia* and the African genus *Negroroncus* by the absence of a lamina exterior [except in *D. siamensis* (With 1906) which will be transferred to a separate genus in a forthcoming review of the Asian Ideoroncidae]; and from the African genera *Nannoroncus* and *Afroroncus* by the lack of stout setae on the mesal surface of the chelal fingers.

Description.—*Adults:* All setae long, straight and acicular. Most cuticular surfaces smooth and glossy.

Pedipalps long and slender. Fixed chelal finger with 20 trichobothria, movable chelal finger with 10 trichobothria: *eb* region with 1 trichobothrium; *est* region with 6 trichobothria; *ib* region with 4 trichobothria; *ist* region with 5 trichobothria; *b* region with 2 trichobothria; and *t* region with 6 trichobothria; *st* not ventrally displaced. Venom apparatus present in both chelal fingers, venom duct terminating in nodus ramosus near *est* region in fixed finger and near *t* region in movable finger. Chelal teeth all closely spaced. Externodistal condyle on the chelal hand enlarged and bifurcate.

Chelicera with 6 or 7 long, acuminate setae on hand; movable finger with 1 long subdistal seta; flagellum of 4 thickened blades, all

blades serrate; lamina exterior absent; galea long and slender.

Cephalothorax: carapace with 2 small, bulging eyes; without furrows; anterior margin with 4 setae. Manducatory process with 2 long distal setae. Median maxillary lyrifissure present and sub-basally situated.

Abdomen: tergites and sternites undivided, but medial sternites with very thin medial suture line. Pleural membrane longitudinally striate. Each stigmatic sclerite with 1 or 2 setae. Spiracles simple, with spiracular helix.

Legs: femur I and II without basal swelling; femora I and II with primary slit sensillum directed transversely; femur I much longer than patella I; suture line between femur IV and patella IV transverse; metatarsus shorter than tarsus; metatarsal pseudotactile seta subproximal; legs with two bifid or trifid subterminal tarsal setae; arolium longer than claws, not divided but slightly indented at fringed ventral margin; claws slender and simple.

Nymphs: Much like adults, but trichobothrial patterns as follows: tritonymph with 14 on fixed finger and 8 on movable finger; deutonymph with 9 on fixed finger and 6 on movable finger; and protonymph with 3 on fixed finger and 1 on movable finger.

Remarks.—As discussed under the diagnosis, the principal feature by which species of *Pseudalbiorix* can be distinguished from all other ideoroncids is the presence of an enlarged and bifurcate externo-distal condyle on the chelal hand (Figs. 10, 31). This feature is found in all post-embryonic stages of *P. reddelli*, the tritonymphs of *P. veracruzensis* and *P. armasi*, and we presume that it also occurs in all other stages of members of the genus.

Apart from the two new species described herein, we also transfer two Mexican species, *A. veracruzensis* Hoff 1945 and *A. reddelli* Muchmore 1982, to *Pseudalbiorix*, as they possess all of the diagnostic features of the genus. Indeed, both Muchmore (1982) and Mahnert (1984) discussed the taxonomic position of *A. reddelli* and suggested that the species may be misplaced within *Albiorix*. With the discovery of additional species of similar morphology to *A. reddelli*, we here formally remove *A. veracruzensis* and *A. reddelli* from *Albiorix* and erect a new genus for this group of species.

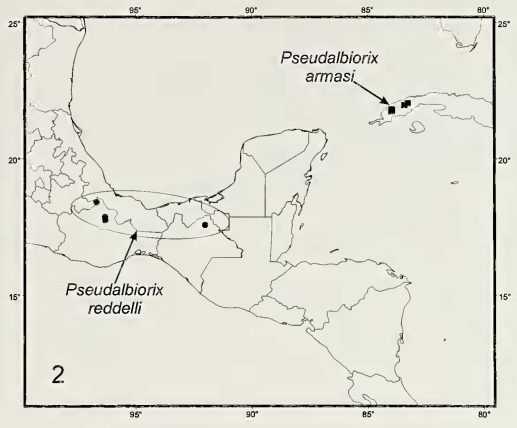
In a separate study, Harvey & Mahnert (2006) transferred the three Brazilian *Albiorix* species, *A. arboricola* (Mahnert 1979), *A. gracilis* Mahnert 1985 and *A. lamellifer* Mahnert 1985, to a separate genus *Xorilbia* Harvey & Mahnert 2006. The recognition of *Pseudalbiorix* and *Xorilbia* leaves *Albiorix* with just 11 species, distributed as follows: *A. anophthalmus* Muchmore 1999, *A. bolivari* Beier 1963, *A. conodentatus* Hoff 1945, *A. edentatus* Chamberlin 1930, *A. magnus* Hoff 1945, the type species *A. mexicanus* (Banks 1898), *A. mirabilis* Muchmore 1982, *A. parvidentatus* Chamberlin 1930, *A. retrodentatus* Hoff 1945 from Mexico or western USA, *A. argentiniensis* (Hoff 1950) from Argentina, and *A. chilensis* (Ellingsen 1905) from Chile. All species of the genus have deeply divided arolia, which are longer than the tarsi. Deeply divided arolia are not known in any other ideoroncid.

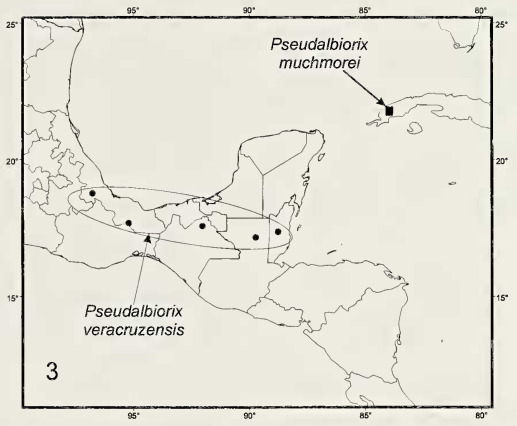
Distribution.—Members of the genus *Pseudalbiorix* have been recorded from Belize, Guatemala, southern Mexico and in western Cuba (Figs. 2, 3), in both cavernicolous and epigean habitats. Specimens have been mostly collected from habitats close to the ground such as litter, under stones or from logs, although two specimens of *P. veracruzensis* were taken from "under bark".

KEY TO SPECIES OF *PSEUDALBIORIX*

1. Most teeth of fixed chelal finger long and erect, clearly longer than wide 2
   Most teeth of fixed chelal finger of medium length and retrorse, clearly wider than long .. 3
2. Large troglomorphic species [e.g., pedipalpal femur 1.26–1.39 mm in length; chela (without pedicel) 2.10–2.24 mm in length] ..... *Pseudalbiorix muchmorei* (western Cuba)
   Medium-sized epigean species [e.g., pedipalpal femur 0.68–1.03 mm in length; chela (without pedicel) 1.14–1.68 mm in length] ..... *Pseudalbiorix armasi* (western Cuba)
3. Slightly larger in size [e.g., chela (with pedicel) length greater than 1.20 mm]; most teeth of fixed chelal finger triangular ..... *Pseudalbiorix reddelli* (Mexico)
   Slightly smaller in size [e.g., chela (with pedicel) length less than 1.20 mm]; most teeth of fixed chelal finger arcuate ..... *Pseudalbiorix veracruzensis* (Belize, Guatemala and Mexico)

Figure 1.—*Pseudalbiorix reddelli* (Muchmore), female from Cerro Cahui, Guatemala (FSCA, WM 8151).





Figures 2–3.—Maps showing known distributions of *Pseudalbiorix* species: 2. *P. reddelli* (Muchmore) and *P. armasi* Barba & Pérez, new species; 3. *P. veracruzensis* (Hoff) and *P. muchmorei* Barba & Pérez, new species.

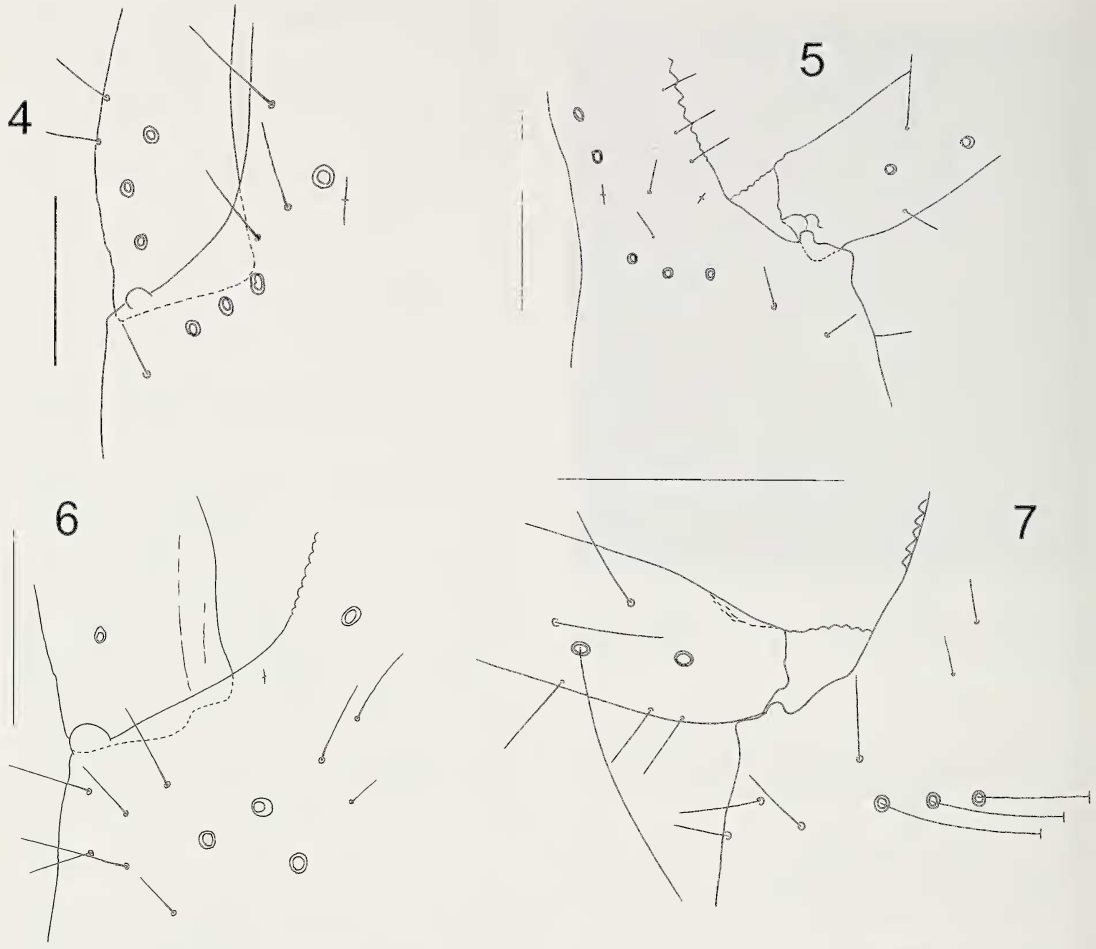
Pseudalbiorix reddelli (Muchmore 1982), NEW COMBINATION
Figs. 1, 2, 8–22

Albiorix reddelli Muchmore 1982:77, figs. 37–40; Mahnert 1984:676–677, fig. 47 (as *Albiorix* (?) *reddeli* [sic]); Harvey 1991:318.

Material examined.—MEXICO: *Oaxaca:* Holotype female, Grutas de Monteflor, 6 km N. of Valle Nacional [17°50′N, 96°19′W], 28 December 1972, J.R. Reddell (FSCA, WM 2957.01001, slide-mounted). Paratype: 1 female, same data as holotype (FSCA, WM 2957.01002, slide-mounted).

Other material: MEXICO: *Chiapas:* 1 ♂, 1 ♀, near Palenque, Chacamax R. road [17°29′N, 92°01′W], Berlese extraction from rotting log, 3 February 1976, C. Alteri (WAM T56705–56706, WM 4550.02001–2); 2 ♀, 1 tritonymph, 1 protonymph, Ruinas de Palenque [17°29′N, 92°01′W], litter, 29 March 1974, C. Alteri (FSCA, WM 3552.04001–4); 1 ♂, 1 ♀, La Canada, Palenque [17°29′N, 92°01′W], litter from woods, 27 March 1974, C. Alteri (FSCA, WM 3546.03002); 1 protonymph, Palenque Ruins [17°29′N, 92°01′W], 16 March 1975, C. Alteri (FSCA, WM 3977.02001); 1 deutonymph, Olvidado, Ruinas de Palenque [17°29′N, 92°01′W], under stone, March 1983, C. Alteri (FSCA, WM 6391.01001); *Oaxaca:* 1 ♂, Cueva de la Culebra, 10 km SW. of Acatlán de Perez Figueroa [18°28′N, 96°41′W], 7 December 1993, P. Sprouse (FSCA, WM 7974.02001); 1 ♂, 1 ♀, 6 miles [= 9.7 km] S. of Valle Nacional [17°41′N, 96°19′W], 2000 feet [= 608 m], 19 May 1971, S. Peck (FSCA, WM 2522.03001–2).

Diagnosis.—*Pseudalbiorix reddelli* differs from the Cuban species *P. muchmorei* and *P. armasi* by the shape of the fixed chelal finger teeth which are long and erect in the two Cuban species, but short and retrorse in *P. reddelli*. It differs from *P. veracruzensis* by the shape of the fixed chelal finger teeth which are arcuate in *P. veracruzensis*, but are mostly triangular without arcuate edges in *P. reddelli*. They also differ in size, as *P. reddelli* is



Figures 4–7.—Detail of chelal externo-distal condyle: 4. *Ideoroncus lenkoi* Beier, male from São Sebastiao, Station Biologique, São Paulo, Brazil (WAM 90/1166); 5. *Albiorix mirabilis* Muchmore 1982, holotype male from Cueva de las Maravillas, Oaxaca, Mexico (FSCA, WM 4675.03001); 6. *Dhanus sumatranus* (Redikorzev 1922), male from 'Datu Caves, Sumatra' (CAS, JC-103.01001); 7. *Typhloroncus coralensis* Muchmore 1979, male from St John, U.S. Virgin Islands (FSCA, WM 6566.02001). Scale lines = 0.05 mm (Fig. 4), 0.2 mm (Figs. 5–7).

slightly larger than *P. veracruzensis* [e.g., the chela (with pedicel) measurements taken are depicted in Fig. 8].

Description.—*Adult:* Color light red-brown. Setae long, straight and acicular.

Pedipalp (Fig. 11): femur lightly granulate on anterior margin, trochanter and patella with scattered granulations; trochanter 1.79–2.22 (♂), 1.95–2.22 (♀), femur 3.68–3.79 (♂), 3.40–3.96 (♀), patella 2.52–2.84 (♂), 2.55–3.00 (♀), chela (with pedicel) 3.69–4.03 (♂), 3.42–4.12 (♀), chela (without pedicel) 3.61–3.87 (♂), 3.38–3.95 (♀), hand 1.64–1.80 (♂), 1.49–1.73 (♀) times longer than broad, movable finger 1.17–1.26 (♂), 1.11–1.31 (♀) times longer than hand. Fixed chelal finger with 20 trichobothria, movable chelal finger with 10 trichobothria (Fig. 17): *eb, esb* and *isb* in straight row at base of finger; *eb, esb, isb, it* and *et* regions each with 1 trichobothrium; *ib* region with 4 trichobothria; *ist* region with 5 trichobothria; *est* region with 6 trichobothria; *et* slightly distal to *it*; *b* region with 2 trichobothria; *sb* and *st* regions each with 1 trichobothrium; *t* region with 6 trichobothria. Venom apparatus present in both chelal fingers, venom duct terminating in nodus ramosus near *est* region in fixed finger and near

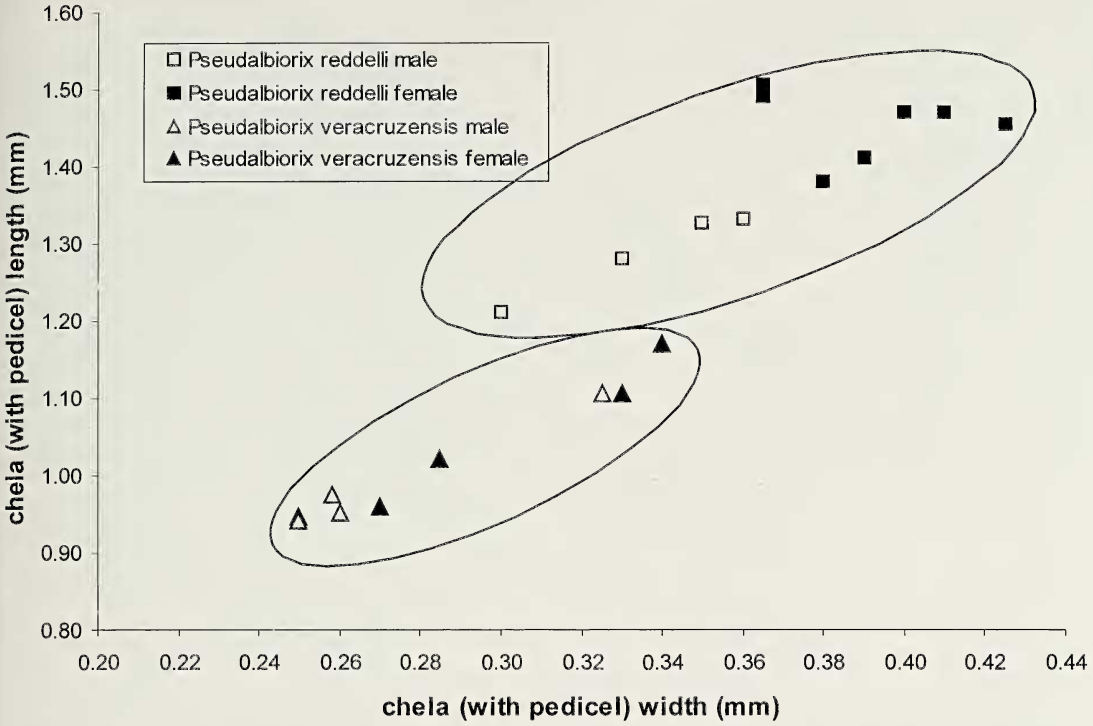


Figure 8.—Graph depicting pedipalpal chela (with pedicel) length versus width in *Pseudalbiorix reddelli* and *P. veracruzensis*. Females are depicted with closed symbols and males with open symbols.

basal section of *t* region in movable finger. Chelal hand with externo-distal condyle enlarged and bifurcate (Fig. 10). Chelal teeth evenly spaced: fixed finger with 32–37 (♂, ♀) slightly retrorse teeth, margins triangular, not arcuate; movable finger with 21–25 (♂, ♀) low, rounded teeth, plus two small upraised distal teeth.

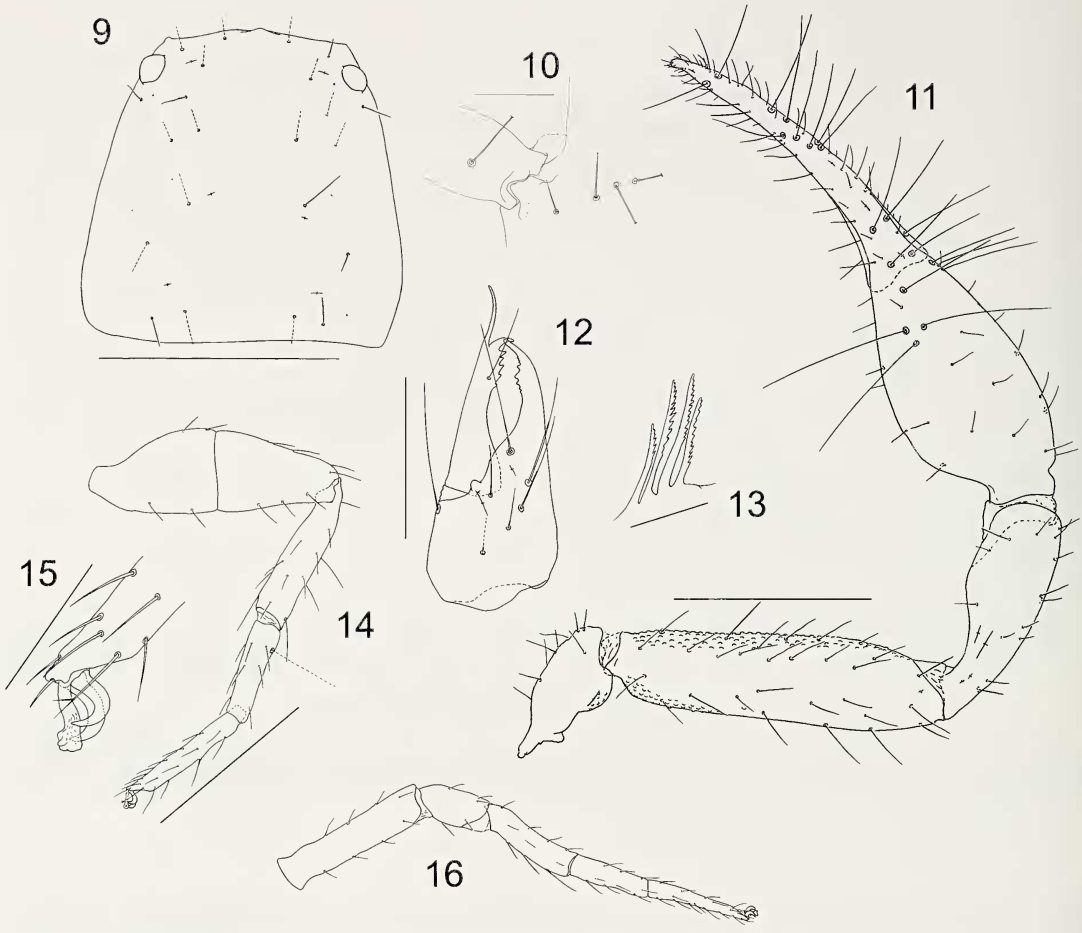
Chelicera (Fig. 12): with 6 or, very occasionally, 7 setae on hand [7 on left chelicera of holotype]; movable finger with 1 subdistal seta; galea very slender and elongate; fixed finger with 5–6 (♂, ♀) small teeth as well as several minute teeth; movable finger with 5–6 (♂, ♀) teeth; flagellum (Fig. 13) of 4 blades, each with several serrations; lamina exterior absent.

Cephalothorax: carapace (Fig. 9) 0.94–1.11 (♂), 0.97–1.00 (♀) times longer than broad; lateral margins evenly convex; with 2 small bulging eyes; with small epistome; with ca. 22 setae, including 4 setae on anterior margin and 4 on posterior margin; without furrows. Coxal chaetotaxy: ♂ (WM 2522.03002), 3: 5: 5: 5; holotype ♀, 5: 5: 5: 5; pedipalpal coxa with 2 apical setae, apex somewhat pointed.

Abdomen: tergites not divided, medial sternites with very thin medial suture line; sclerites uniseriate. Tergal chaetotaxy: ♂ (WM 2522.03002), 2: 4: 6: 8: 9: 11 10: 9: 9: 9 (including 2 tactile setae): 7: 2; holotype ♀, 2: 4: 5: 7: 9: 10: 9: 9: 10: 8: 7: 2. Sternal chaetotaxy: ♂ (WM 2522.03002), 6: (2)2[4](2): (2)6(2): 11: 12: 12: 12: 11: 11: 9: 2; holotype ♀, 6: (2)3(2): (2)4(2): 10: 9: 11: 11: 11: 12: 8: 2; setae of anterior genital operculum (sternite II) of ♀ very small. Setae of tergites and sternites IX–XI acuminate; with several tactile setae.

Genitalia of male with small dorsal apodeme, median genital sac not preserved in material examined; genitalia of female with large gonosac which is covered with scattered pores.

Legs (Figs. 14–16): femur+patella 2.56–2.82 (♂), 2.21–2.98 (♀) times longer than broad; subterminal tarsal setae trifurcate; arolium longer than claws, not divided.



Figures 9–16.—*Pseudalbiorix reddelli* (Muchmore), holotype female, unless stated otherwise: 9. Carapace; 10. Detail of left chelal externo-distal condyle; 11. Right pedipalp, dorsal view; 12. Left chelicera; 13. Left flagellum, female from 6 miles [= 9.7 km] S. of Valle Nacional (FSCA, WM 2522.03001); 14. Left leg IV; 15. Detail of distal end of tarsus IV; 16. Left leg I. Scale lines = 0.5 mm (Figs. 9, 11, 14, 16), 0.2 mm (Fig. 12), 0.1 mm (Figs. 10, 13, 15).

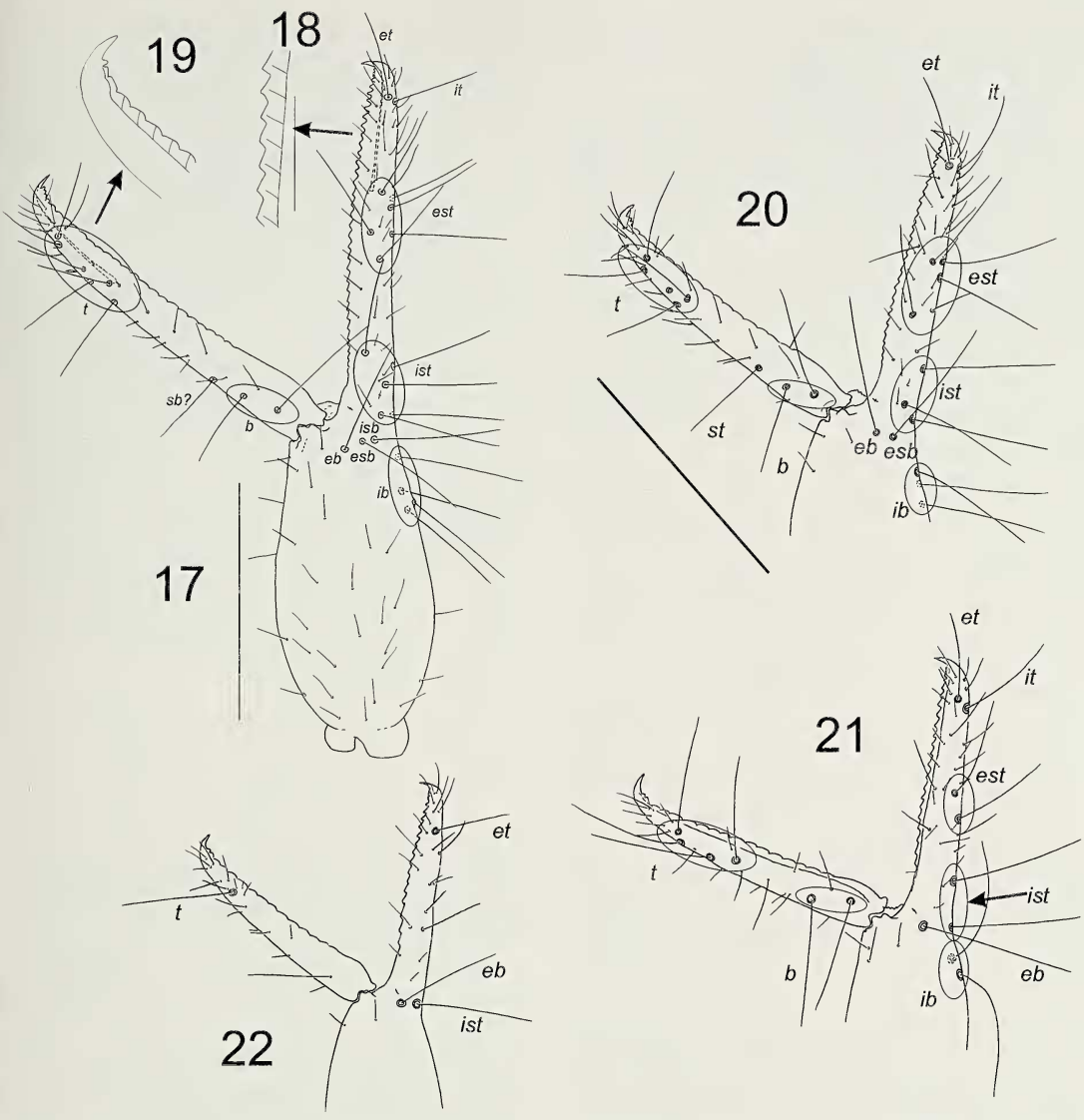
Tritonymph: Pedipalps: trochanter 1.97, femur 3.41, patella 2.31, chela (with pedicel) 3.68, chela (without pedicel) 3.57 times longer than broad. Fixed finger with 14 trichobothria, movable finger with 8 trichobothria (Fig. 20); *eb, esb, it* and *et* regions each with 1 trichobothrium; *ib* region with 3 trichobothria; *ist* region with 3 trichobothria; *est* region with 4 trichobothria; *et* slightly distal to *it*; *b* region with 2 trichobothria; *st* region with 1 trichobothrium; *t* region with 5 trichobothria. Chelal hand with externo-distal condyle enlarged and bifurcate.

Chelicera: galea long, nearly straight; hand with 5 setae, movable finger with 1 seta; fixed finger with 5 small teeth, movable finger with 5 small teeth; flagellum composed of 4 blades, all serrate.

Cephalothorax: carapace: small epistome present; one pair of small eyes present; with 4 setae on anterior margin and 4 setae on posterior margin.

Legs: metatarsus and tarsus not fused; arolium longer than claws, not divided.

Deutonymph: Pedipalps: trochanter 2.09, femur 3.71, patella 2.32, chela (with pedicel) 3.95, chela (without pedicel) 3.86 times longer than broad. Fixed finger with 9 trichobothria, movable finger with 6 trichobothria (Fig. 21); *eb, it* and *et* regions each with 1 trichobothrium; *ib* region with 3 trichobothria; *ist* region with 1 trichobothrium; *est* region with 2 tri-



Figures 17–22.—*Pseudalbiorix reddelli* (Muchmore), holotype female, unless stated otherwise: 17. Left chela, lateral view; 18. Detail of teeth from fixed finger; 19. Detail of teeth from moveable finger; 20. Left chela, lateral view, tritonymph from Ruinas de Palenque (FSCA, WM 3552.04003); 21. Left chela, lateral view, deutonymph from Ruinas de Palenque (FSCA, WM 6391.01001); 22. Left chela, lateral view, protonymph from Ruinas de Palenque (FSCA, WM 3552.04004); Scale lines = 0.5 mm (Figs. 17, 20–22), 0.1 mm (Figs. 18, 19).

chobothria; *et* slightly distal to *it*; *b* region with 2 trichobothria; *t* region with 4 trichobothria. Chelal hand with externo-distal condyle enlarged and bifurcate.

Chelicera: galea long, slightly curved; hand with 5 setae, movable finger with 1 seta; fixed finger with 6 small teeth, movable finger with 5 small teeth; flagellum composed of 4 blades, all serrate.

Cephalothorax: carapace 0.98 times longer than broad; small epistome present; one pair of small eyes present; with 4 setae on anterior margin and 4 setae on posterior margin.

Legs: metatarsus and tarsus not fused; arolium longer than claws, not divided.

Protonymph: Pedipalps: trochanter 1.73–1.89, femur 3.36–3.50, patella 2.17–2.23, chela (with pedicel) 3.74–4.13, chela (without pedicel) 3.66–4.06 times longer than broad. Fixed finger with 3 trichobothria, movable fin-

ger with 1 trichobothrium (Fig. 22); *eb, et, ist* and *t* present. Chelal hand with externo-distal condyle enlarged and bifurcate.

Chelicera: galea long, nearly straight; hand with 4 setae, movable finger without seta; fixed finger with 4 small teeth, movable finger with 3 small teeth; flagellum composed of 4 blades, all serrate.

Cephalothorax: carapace 1.03 times longer than broad; very small epistome present; one pair of small eyes present; with 4 setae on anterior margin and 2 setae on posterior margin. Posterior maxillary lyrifissure absent.

Legs: metatarsus and tarsus not fused; arolium longer than claws, not divided.

Dimensions (mm).—*Males:* specimen from 6 miles [= 9.7 km] S. of Valle Nacional (from near type locality) (WM 2522.03002) followed by other males: Body length 2.17 (1.97–2.01). Pedipalps: trochanter 0.355/0.16 (0.325–0.35/0.155–0.19), femur 0.77/0.205 (0.72–0.81/0.19–0.22), patella 0.54/0.19 (0.48–0.56/0.185–0.21), chela (with pedicel) 1.28/0.33 (1.21–1.33/0.30–0.36), chela (without pedicel) 1.235 (1.16–1.30), hand length 0.57 (0.54–0.59), movable finger length 0.665 (0.65–0.74). Chelicera 0.325/0.15 (0.2950.33/0.15–0.18). Carapace 0.65/0.665 (0.635–0.65/0.57–0.69); eye diameter 0.07 (0.06–0.064). Leg I: femur 0.38/0.105 (0.38–0.40/0.105–0.11), patella 0.19/0.10 (0.18–0.19/0.095–0.11), tibia 0.265–0.075 (0.245–0.25/0.07–0.075), metatarsus 0.18/0.06 (0.17/0.06–0.07), tarsus 0.28/0.045 (0.25–0.29/0.04–0.06). Leg IV: femur + patella 0.62/0.22 (0.58–0.64/0.22–0.25), tibia 0.415/0.105 (0.39–0.42/0.095–0.10), metatarsus 0.25/0.075 (0.235–0.25/0.075–0.08), tarsus 0.36/0.05 (0.32/0.37/0.05).

Females: Holotype FSCA (WM 2957.01001) followed by other females: Body length 2.53 (1.95–2.63). Pedipalps: trochanter 0.37/0.18 (0.37–0.40/0.17–0.19), femur 0.90/0.23 (0.83–0.87/0.22–0.25), patella 0.614/0.205 (0.56–0.61/0.19–0.23), chela (with pedicel) 1.504/0.365 (1.38–1.49/0.37–0.43), chela (without pedicel) 1.440 (1.35–1.44), hand length 0.629 (0.63–0.68), movable finger length 0.819 (0.75–0.83). Chelicera 0.333/0.154 (0.36–0.39/0.16–0.19). Carapace 0.640/0.688 (0.65–0.71/0.70–0.72); eye diameter 0.064 (0.06–0.07). Leg I: femur 0.447/0.109 (0.42–0.45/0.11–0.125), patella 0.211/0.103 (0.21–0.22/0.11–0.115), tibia 0.294/0.074 (0.245–0.295/0.08–0.085), metatarsus 0.218/0.061 (0.18–0.215/0.065–0.075), tarsus 0.294/0.045 (0.28–0.31/0.05). Leg IV: femur + patella 0.706/0.237 (0.64–0.71/0.245–0.29), tibia 0.464/0.100 (0.41–0.46/0.10–0.12), metatarsus 0.289/0.077 (0.25–0.30/0.08–0.09), tarsus 0.371/0.058 (0.295–0.39/0.055–0.06).

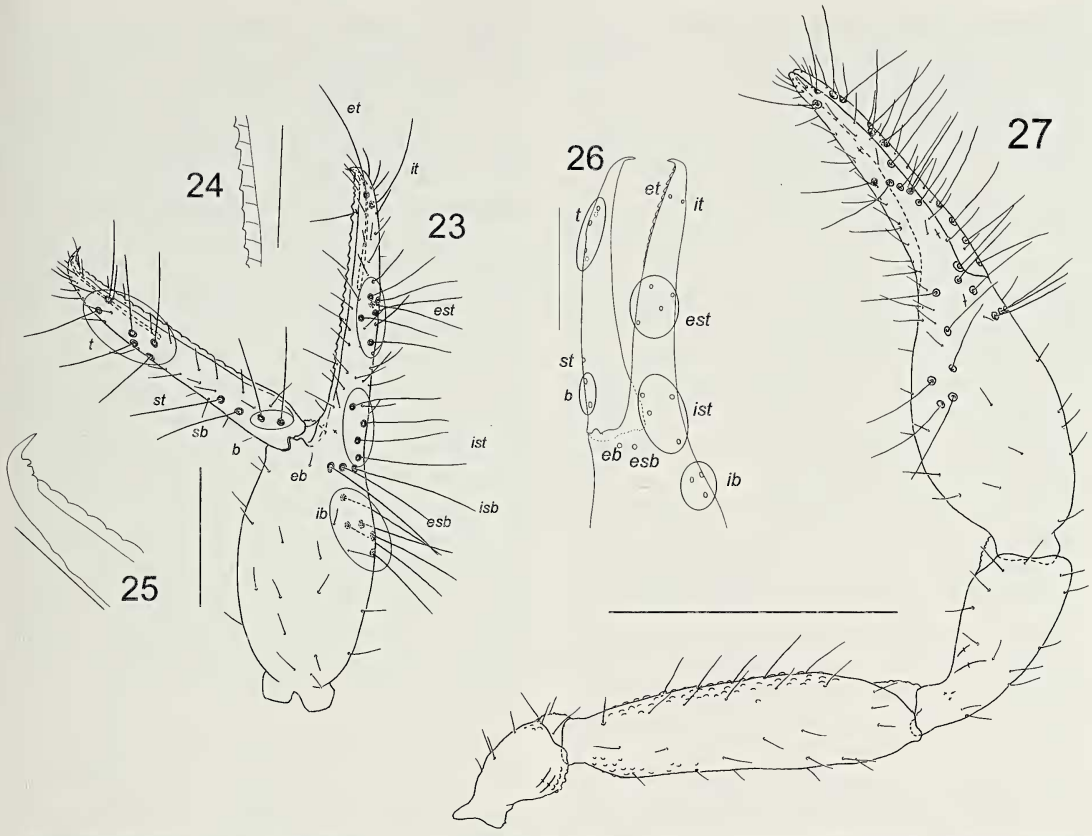
Tritonymph: Specimen from Ruinas de Palenque (WM 3552.04003): Body length 1.95. Pedipalps: trochanter 0.295/0.150, femur 0.630/0.185, patella 0.415/0.180, chela (with pedicel) 1.105/0.300, chela (without pedicel) 1.070, hand length (without pedicel) 0.490, movable finger length 0.590. Carapace 0.550/?.

Deutonymph: Specimen from Olvidado, Ruinas de Palenque (WM 6391.01001): Body length 1.440. Pedipalps: trochanter 0.230/0.110, femur 0.520/0.140, patella 0.325/0.140, chela (with pedicel) 0.87/0.220, chela (without pedicel) 0.850, hand length (without pedicel) 0.380, movable finger length 0.490. Carapace 0.480/0.49.

Protonymph: Specimen from Ruinas de Palenque (FSCA, WM 3552.04004): Body length 1.10. Pedipalps: trochanter 0.190/0.110, femur 0.420/0.125, patella 0.260/0.120, chela (with pedicel) 0.71/0.190, chela (without pedicel) 0.695, hand length (without pedicel) 0.295, movable finger length 0.400. Carapace 0.360/0.350.

Remarks.—*Pseudalbiorix reddelli* is known from the southern Mexican states of Chiapas and Oaxaca (Fig. 2), where it occurs in litter, under stones, in rotting logs and inside caves. The two type specimens from Grutas de Monteflor possess a slightly more slender chela than the other specimens which, apart from a single male specimen taken from a cave (Cueva de la Culebra, Oaxaca), were collected from epigean habitats. We can find no other substantial differences between any of the cave-dwelling specimens and their epigean counterparts and conclude that they all represent a single species.

At Palenque (Chiapas), *P. reddelli* occurs sympatrically with *P. veracruzensis* (Figs. 2, 3), but it appears that they may be separated ecologically, as most records of *P. reddelli* appear to be from ground habitats (under stones, in litter, inside logs), whereas *P. veracruzensis* was found "under bark", presumably of a tree.



Figures 23–27.—*Pseudalbiorix veracruzensis* (Hoff), male from 2.5 km S. of Belmopan, Belize (FSCA, WM 3067.03001), unless stated otherwise: 23. Left chela, lateral view; 24. Detail of teeth from fixed finger; 25. Detail of teeth from moveable finger. 26. Left chela, dorsolateral view, setae omitted, paratype tritonymph (AMNH); 27. Right pedipalp, dorsal view. Scale lines = 0.5 mm (Fig. 27), 0.25 (Fig. 23), 0.2 mm (Fig. 26), 0.1 mm (Figs. 24, 25).

Pseudalbiorix veracruzensis (Hoff 1945), NEW COMBINATION
Figs. 3, 8, 23–27

Albiorix veracruzensis Hoff 1945:4–7, figs 6–9; Harvey 1991:318.

Material examined.—MEXICO: *Veracruz-Llave:* Paratypes: 2 males, 1 tritonymph, "Buena Ventura" plantation [ca. 17°37′N, 95°12′W], July 1909, A. Petrunkevitch (AMNH, slide-mounted).

Other material: BELIZE: *Cayo:* 2 ♂, 1 ♀, 2.5 miles [= 4.0 km] S. of Belmopan [17°14′N, 88°46′W], 4 August 1972, berlese, limestone forest, S. and J. Peck (FSCA, WM 3067.03001–3); 2 ♂, 1 ♀, Belmopan [17°15′S, 88°46′W], 1–15 August 1972, berlese, termite nests, S. and J. Peck (WAM T56707–56709, WM 3066.05001–3). GUATEMALA: *Petén:* 1 ♀, biotopo Cerro Cahui [17°00′N, 89°44′W], 18 April 1996, S. Foia (FSCA, WM 8151). MEXICO: *Chiapas:* 1 ♂, 1 ♀, Palenque [17°29′N, 92°01′W], under bark, 23 January 1976, C. Alteri (FSCA, WM 4537.01001–2); *Veracruz-Llave:* 1 ♀, Atoyac [18°54′N, 96°46′W], "bosque", 13 November 1941, C. Bolívar, F. Bonet (CAS, JC-1888.01001).

Diagnosis.—*Pseudalbiorix veracruzensis* differs from all other members of the genus by its small size [e.g., chela (with pedicel) length 0.94–1.105 (♂), 0.96–1.17 (♀) mm] and by the shape of the teeth of the fixed chelal finger which have an arcuate outline. It is most similar to *P. reddelli* but is slightly smaller [e.g., the chela (with pedicel) measurements taken are depicted in Fig. 8].

Description.—*Adult:* Color light red-brown. Setae long, straight and acicular.

Pedipalp (Fig. 27): femur lightly granulate

on anterior and postero-basal margins, trochanter and patella with scattered granulations; trochanter 2.04–2.24 (♂), 2.00–2.19 (♀), femur 3.41–3.78 (♂), 3.46–3.76 (♀), patella 2.41–2.59 (♂), 2.45–2.63 (♀), chela (with pedicel) 3.40–3.90 (♂), 3.35–3.58 (♀), chela (without pedicel) 3.32–3.70 (♂), 3.32–3.47 (♀), hand 1.60–1.74 (♂), 1.56–1.72 (♀) times longer than broad, movable finger 1.11–1.18 (♂), 1.05–1.14 (♀) times longer than hand. Fixed chelal finger with 20 trichobothria, movable chelal finger with 10 trichobothria (Fig. 23): *eb, esb* and *isb* in straight row at base of finger; *eb, esb, isb, it* and *et* regions each with 1 trichobothrium; *ib* region with 4 trichobothria; *ist* region with 5 trichobothria; *est* region with 6 trichobothria; *et* slightly distal to *it*; *b* region with 2 trichobothria; *sb* and *st* regions each with 1 trichobothrium; *t* region with 6 trichobothria. Venom apparatus present in both chelal fingers, venom duct terminating in nodus ramosus near *est* region in fixed finger and near basal section of *t* region in movable finger. Chelal hand with externo-distal condyle enlarged and bifurcate. Chelal teeth evenly spaced: fixed finger (Fig. 24) with 23–26 (♂, ♀) strongly retrorse teeth, most with arcuate margins; movable finger (Fig. 25) with 18–23 (♂, ♀) low, rounded teeth, plus two small upraised distal teeth.

Chelicera: with 6 setae on hand; movable finger with 1 subdistal seta; galea very slender and elongate; fixed finger with 4–5 (♂, ♀) small teeth as well as several minute teeth; movable finger with 5–6 (♂, ♀) teeth; flagellum of 4 blades, each with several serrations; lamina exterior absent.

Cephalothorax: carapace 0.99–1.38 (♂), 0.98–1.15 (♀) times longer than broad; lateral margins evenly convex; with 2 small bulging eyes; with small epistome; with ca. 22 setae, with 4 setae on anterior margin and 4 on posterior margin; without furrows. Coxal chaetotaxy: ♂ (WM 3067.03001), 4: 4: 5: 6; ♀ (WM 3067.03003), 4: 5: 5: 6; pedipalpal coxa with 2 apical setae, apex somewhat pointed.

Abdomen: tergites not divided, medial sternites with very thin medial suture line; sclerites uniseriate. Tergal chaetotaxy: ♂ (WM 3067.03001), 2: 4: 7: 8: 9: 9: 9: 8: 9: 9: 5: 2; ♀ (WM 3067.03003), 2: 3: 8: 8: 8: 9: 9: 9: 9: 7: 4: 2. Sternal chaetotaxy: ♂ (WM 3067.03001), 9: (1)6[6](1): (2)3(2): 8: 9: 9: 10: 11: 11: 7: 2; ♀ (WM 3067.03003), 5: (1)2(1): (2)2(2): 10: 9: 10: 9: 11: 11: 4: 2. Setae of tergites and sternites IX–XI acuminate; with several tactile setae.

Genitalia of male with small dorsal apodeme, median genital sac not preserved in material examined; genitalia of female with large gonosac that is covered with scattered pores.

Legs: femur + patella 2.30–2.43 (♂), 2.48–2.66 (♀) times longer than broad; subterminal tarsal setae trifurcate; arolium longer than claws, not divided.

Tritonymph: Pedipalps: trochanter 2.06, femur 3.57, patella 2.30, chela (with pedicel) 3.65, chela (without pedicel) 3.48 times longer than broad. Fixed finger with 15 trichobothria, movable finger with 8 trichobothria (Fig. 26); *eb, esb, it* and *et* regions each with 1 trichobothrium; *ib* region with 4 trichobothria; *ist* region with 3 trichobothria; *est* region with 4 trichobothria; *et* slightly distal to *it*; *b* region with 2 trichobothria; *st* region with 1 trichobothrium; *t* region with 5 trichobothria. Chelal hand with externo-distal condyle enlarged and bifurcate.

Chelicera: galea long, slightly curved; hand with 6 setae, movable finger with 1 seta; fixed and moveable fingers each with 5 small teeth; flagellum composed of 4 blades, all serrate.

Cephalothorax: carapace: small epistome present; one pair of small eyes present; with 4 setae on anterior margin and 4 setae on posterior margin.

Legs: metatarsus and tarsus not fused; arolium longer than claws, not divided.

Dimensions (mm).—*Males:* Specimen from 2.5 miles [= 4.0 km] S. of Belmopan, Belize (FSCA, WM 3067.03001) followed by other males, including paratypes: Body length 1.89 (1.81–1.95). Pedipalps: trochanter 0.28/0.125 (0.265–0.30/0.13–0.14), femur 0.64/0.17 (0.60–0.665/0.160–0.195), patella 0.415/0.16 (0.385–0.445/0.16–0.185), chela (with pedicel) 0.975/0.258 (0.942–1.105), chela (without pedicel) 0.94 (0.925–1.08), hand length 0.45 (0.42–0.52), movable finger length 0.53 (0.495–0.58). Chelicera 0.26/0.125 (0.25–0.30/0.12–0.155). Carapace 0.585/0.52 (0.53–0.615/0.385–0.62); eye diameter 0.05 (0.055–0.065). Leg I: femur 0.32/0.095 (0.30–0.35/0.085–0.11), patella 0.16/0.09 (0.15–0.18/0.085–0.105), tibia 0.20/0.065 (0.19–0.22/0.065–0.075), metatarsus 0.155/0.05 (0.13–0.155/0.05–0.06), tarsus 0.23/0.045 (0.23/0.045). Leg IV: femur + patella 0.51/

0.22 (0.49–0.57), tibia 0.34/0.09 (0.31–0.36/0.090.105), metatarsus 0.215/0.065 (0.18–0.23/0.0650.075), tarsus 0.29/0.045 (0.265–0.295/0.0450.05).

Females: Specimen from 2.5 miles [= 4.0 km] S. of Belmopan, Belize (FSCA, WM 3067.03003) followed by other females: Body length 2.24 (1.55–2.41). Pedipalps: trochanter 0.295/0.135 (0.31–0.33/0.155–0.16), femur 0.64/0.17 (0.59–0.725/0.16–0.20), patella 0.42/0.16 (0.39–0.465/0.15–0.19), chela (with pedicel) 1.02/0.285 (0.96–1.17/0.27–0.34), chela (without pedicel) 0.99 (0.905–1.14), hand length 0.49 (0.42–0.555), movable finger length 0.54 (0.48–0.585). Chelicera 0.29/0.14 (0.26–0.32/0.13–0.16). Carapace 0.58/0.59 (0.47–0.63/0.41–0.70); eye diameter 0.05 (0.05–0.06). Leg I: femur 0.32/0.095 (0.36/0.11), patella 0.16/0.085 (0.18/0.105), tibia 0.21/0.065 (0.215–0.22/0.075), metatarsus 0.155/0.05 (0.15–0.155/0.055–0.06), tarsus 0.22/0.045 (0.22–0.23/0.045–0.05). Leg IV: femur + patella 0.52/0.21 (0.55–0.585/0.22), tibia 0.34/0.09 (0.37–0.385/0.095–0.10), metatarsus 0.22/0.065 (0.20–0.23/0.07–0.075), tarsus 0.295/0.05 (0.29–0.295/0.05–0.055).

Tritonymph: Paratype from La Buena Ventura, Veracruz-Llave (AMNH): Body length 1.52. Pedipalps: trochanter 0.237/0.115, femur 0.486/0.136, patella 0.320/0.139, chela (with pedicel) 0.829/0.227, chela (without pedicel) 0.790, hand length (without pedicel) 0.368, movable finger length 0.442. Carapace 0.450/0.365.

Remarks.—The type locality of *Albiorix veracruzensis*, "La Buena Ventura," was a rubber plantation situated in the southern region of Veracruz-Llave, on the border of Oaxaca situated amongst tropical rainforest (Petrunkevitch 1909). Although we were unable to locate and examine the holotype of *A. veracruzensis*, the three paratypes confirm the identity of this species.

Pseudalbiorix veracruzensis is known from Belize, Guatemala and the southern Mexican states of Chiapas and Veracruz-Llave (Fig. 3). The specimens from Belize were taken in Berlese samples in limestone forest and termite nests, the pair from Chiapas was collected from under bark and the female from Atoyac was taken from forest. All specimens are of a small size and possess the characteristically shaped teeth on the fixed chelal finger. As discussed under *P. reddelli*, at Palenque (Chiapas), *P. reddelli* occurs sympatrically (Figs. 2, 3) with *P. veracruzensis* but it appears that they may be separated ecologically.

Pseudalbiorix muchmorei Barba & Pérez, new species
Figs. 3, 28–32

New genus, new species A: Barba & Pérez 2001: 24.

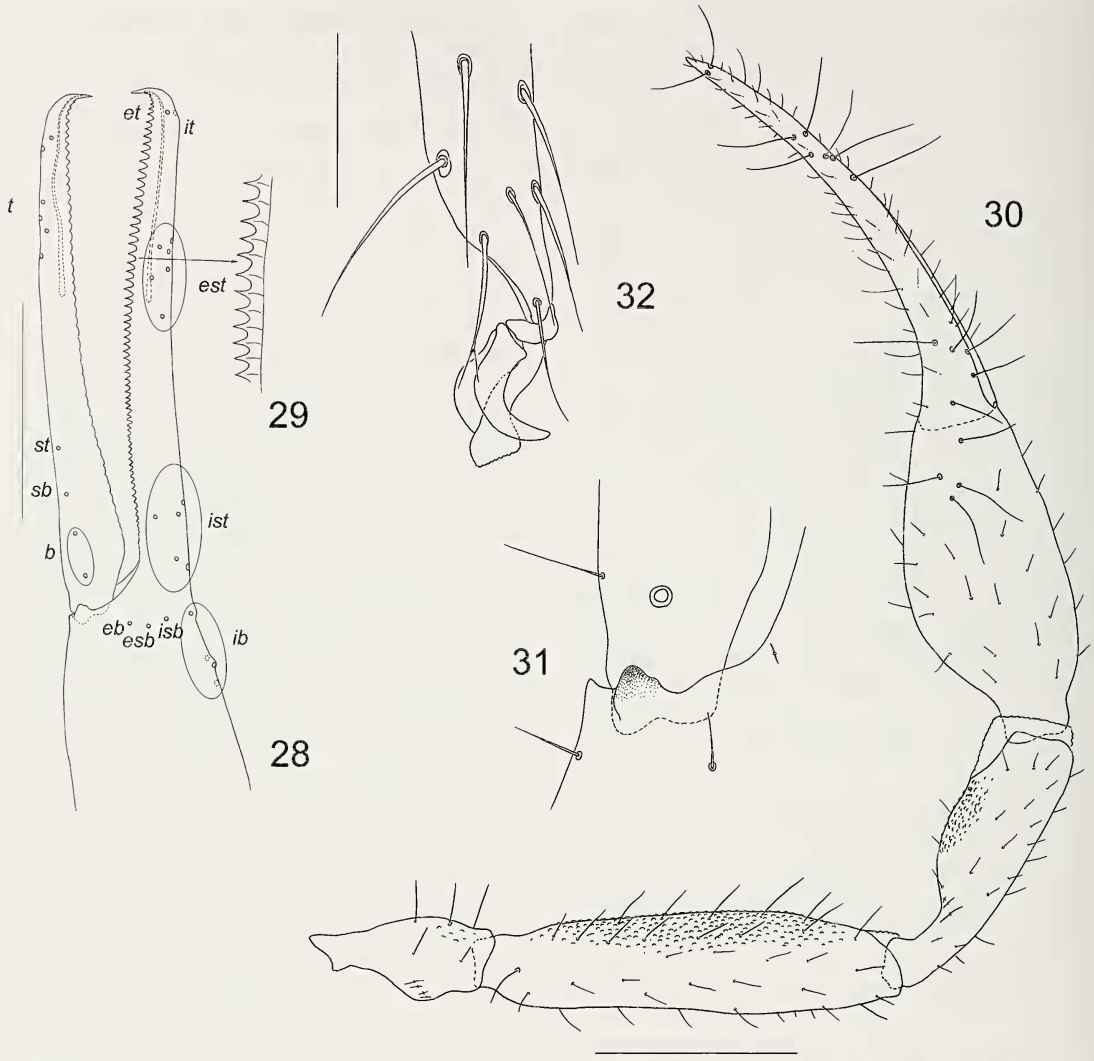
Material examined.—CUBA: *Pinar del Río Province:* Holotype male, Cueva de los Murciélagos, La Jíquima, Gramales, Minas de Matahambre [22°27′56″N, 83°57′47″W], 11 August 1997, R. Barba (ColBK). Paratypes: CUBA: *Pinar del Río Province:* 2 females, same data as holotype (ColBK); 1 female, same data as holotype, except 19 February 1997, no collector (ColBK); 1 female, from the entrance of Cueva de la Majagua, Luis Lazo [22°22′34″N, 83°58′16″W], 11 February 1979, L.F. Armas (CZACC); 1 male, 1 female, Cueva de las Dos Anas, Sistema Subterraneo de Majaguas-Cantera, Sierra de San Carlos, Guane [22°22′34″N, 83°58′16″W], 13 October 1990, A. Pérez (WAM T56393).

Etymology.—This species is named in honor of our co-author W.B. Muchmore, whose research into American pseudoscorpions has forged a new era in our understanding of these fascinating arachnids.

Diagnosis.—Troglobitic species with pale coloration and elongate appendages; large size, 2.92–3.40 mm in length. Pedipalps very long, pedipalpal chela (without pedicel) 2.10–2.24 mm in length. Movable finger with 40–45 marginal teeth, distal ones conical with cusps well developed, the proximal ones much flattened.

Description.—*Adult:* Carapace and palps light brown, other parts pale. Setae long, straight and acicular.

Pedipalp (Fig. 30): very long: femur and patella medially granulated, trochanter with small granules, other surfaces smooth; trochanter 2.06–2.54, femur 3.32–5.31, patella 2.33–3.23, chela (without pedicel) 4.00–4.56, hand 1.92–2.14 times longer than deep, movable finger 1.38–1.44 times longer than hand. Fixed chelal finger with 20 trichobothria, movable chelal finger with 10 trichobothria (Fig. 28): *eb, esb* and *isb* in straight row at base of finger; *eb, esb, isb, it* and *et* regions each with 1 trichobothrium; *ib* region with 4 trichobothria; *ist* region with 5 trichobothria;



Figures 28–32.—*Pseudalbiorix muchmorei* Barba & Pérez, new species, paratype male from Cueva de las Dos Anas (WAM T56393): 28. Left chela, lateral view, setae omitted; 29. Detail of teeth from fixed finger; 30. Right pedipalp, dorsal view; 31. Detail of left chelal externo-distal condyle; 32. Detail of distal end of right tarsus IV. Scale lines = 0.5 mm (Figs. 28, 30), 0.05 mm (Fig. 32).

est region with 6 trichobothria; *et* opposite *it*; *b* region with 2 trichobothria; *sb* and *st* regions each with 1 trichobothrium; *t* region with 6 trichobothria. Venom apparatus present in both chelal fingers, venom duct terminating in nodus ramosus near *est* region in fixed finger and near basal section of *t* region in movable finger. Chelal hand with externo-distal condyle enlarged and slightly bifurcate (Fig. 31). Chelal teeth evenly spaced: fixed finger (Fig. 29) with 54–55 large, long, acutely conical teeth; movable finger with 40–45 teeth, more conical distally and more rounded basally.

Chelicera: with 7 setae on hand; movable finger with 1 subdistal seta; galea very slender and elongate; fixed finger with 5–6 small teeth; movable finger with 5–6 teeth; flagellum of 4 blades, each with several serrations; lamina exterior absent.

Cephalothorax: carapace longer than broad; lateral margins evenly convex; surface reticulated; with 2 small bulging eyes; with small epistome; with ca. 32 setae, including 4 setae on anterior margin and 4 on posterior margin; without furrows. Pedipalpal coxa with 2 apical setae, apex somewhat pointed.

Abdomen: tergites not divided, anterior ter-

gites finely reticulated; sternites IV–IX with very thin medial suture line; sclerites uniseriate. Tergal chaetotaxy: ♂, 2: 2: 4: 6: 7: 8: 8: 8: 9: 4: 8: 2; ♀, 2: 2: 4: 6: 6: 6: 5: 7: 6: 6:?: 2. Sternal chaetotaxy: ♂, 9: (1)9[3 + 3](1): (2)5(2): 7: 7: 10: 9: 9: 8: 2; ♀, 8: (2)2(2): (2)5(2): 9: 8: 8: 9: 9: 10:? : 2; setae of anterior genital operculum (sternite II) of ♀ small. Setae of tergites and sternites IX–XI acuminate; with several tactile setae.

Genitalia of male with small dorsal apodeme, median genital sac not visible in material examined; genitalia of female with large gonosac which is covered with scattered pores.

Legs: leg I with femur 2.13–4.57 times as long as patella; femur + patella 2.40–2.76 times longer than broad; tibia 4.71–5.67 times longer than deep; subterminal tarsal setae trifurcate on legs I and II, and bifid on legs III and IV; metatarsus IV with single subproximal tactile seta; arolium longer than claws, not divided but slightly indented at middle and with distal ventral margins fringed.

Dimensions (mm).—*Male (holotype):* Body length 3.00. Carapace length 0.94. Chelicera 0.44/0.20. Pedipalps: trochanter 0.56/0.24, femur 1.26/0.38, patella 0.84/0.36, chela (without pedicel) 2.16/0.50, hand (without pedicel) 0.92/0.46, pedicel length 0.06, movable finger length 1.32. Leg I: femur 0.62/0.12, patella 0.28/0.12, tibia 0.46/0.08, metatarsus 0.28/0.06, tarsus 0.36/0.04. Leg IV: femur + patella 0.96/0.40, tibia 0.62/0.12, metatarsus 0.34/0.08, tarsus 0.54/0.06.

Female (4 paratypes): Body length 2.92–3.40. Carapace length 0.94–0.96. Chelicera 0.44–0.56/0.18–0.22. Pedipalps: trochanter 0.54–0.56/0.22–0.26, femur 1.26–1.39/0.26–0.38, patella 0.80–0.90/0.26–0.36, chela (without pedicel) 2.10–2.24/0.46–0.54, hand (without pedicel) 0.90–1.04/0.42–0.50, pedicel length 0.06–0.10, movable finger length 1.30–1.46. Leg I: femur 0.62–0.68/0.12–0.14, patella 0.26–0.32/0.12, tibia 0.42–0.46/0.08, metatarsus 0.28–0.32/0.06–0.07, tarsus 0.34–0.41/0.04–0.05. Leg IV: femur+patella 0.96–1.04/0.37–0.40, tibia 0.62–0.68/0.12–0.14, metatarsus 0.33–0.38/0.08–0.10, tarsus 0.50–0.54/0.06–0.07.

Variation.—The holotype possesses a teratological flagellum on the left chelicera, which bears five subequal serrate blades.

Remarks.—*Pseudalbiorix muchmorei* is very similar to *P. armasi*, both found in western Cuba, but differs by its clear troglomorphic characteristics. Although not presenting anophthalmy, *P. muchmorei* shows other troglomorphic characters such as pale coloration, large body size and elongated appendages, particularly the pedipalps with very long fingers and more marginal teeth in the movable finger (40–45 in *P. muchmorei* and 26–28 in *P. armasi*).

The specimens were collected under stones in the twilight and dark zones of caves located within the Sierra de los Órganos, Pinar del Río Province, western Cuba (Fig. 3). *Pseudalbiorix muchmorei* is the third troglobitic pseudoscorpion species to be reported from Cuba, the others are *Antillobisium mitchelli* Dumitresco & Orghidan and *A. vachoni* Dumitresco & Orghidan (Dumitresco & Orghidan 1977).

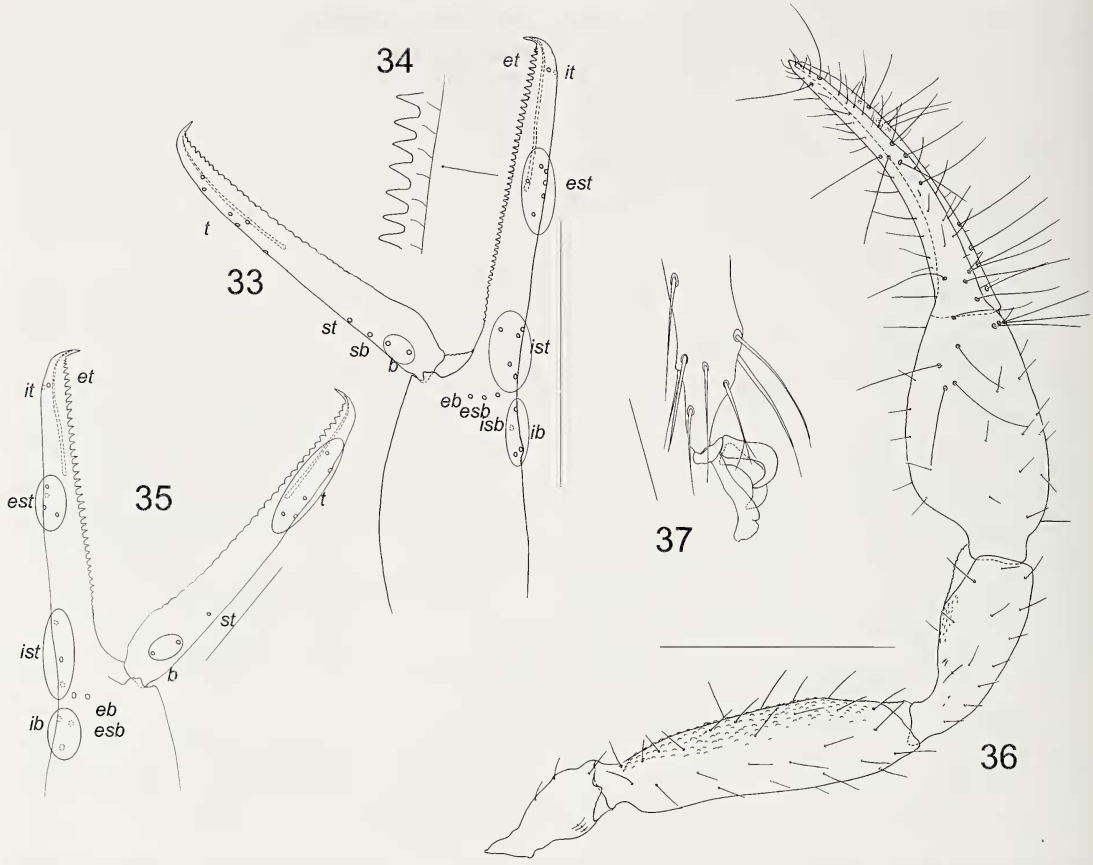
Pseudalbiorix armasi Barba & Pérez, new species
Figs. 2, 33–37

New genus, new species B: Barba & Pérez 2001: 24.

Material examined.—CUBA: *Pinar del Río Province:* Holotype male, Parque la Güira, San Diego de los Baños [22°38′37″N, 83°25′24″W], January 1985, L.F. Armas (CZACC). Paratypes: CUBA: *Pinar del Río Province:* 2 females, same data as holotype (CZACC); 1 male, 1 female, Sierra de San Carlos, Luis Lazo [22°22′20″N, 83°59′03″W], February 1979, L.F. Armas (CZACC); 1 male, 1 female, Loma "El Toro", San Cristóbal [22°43′26″N, 83°16′36″W], 15 February 1981, L.F. Armas (CZACC); 1 female, entrance of Cueva de los Santos Cuajaní, Sierra del Rosario, San Cristóbal [coordinates unknown], 19 February 1981, L.F. Armas (CZACC); 1 male, mogote La Jíquima, Gramales, Minas de Matahambre [22°27′56″N, 83°57′47″W], 23 July 1997, N. Torres, A. Pérez González (ColBK); 2 males, 2 females, same data except 25 February 2001, R. Barba (WAM T56394); 3 males, 1 tritonymph, Luis Lazo, Sabana Llana [22°25′13″N, 83°57′33″W], 29 May 1974, G. Alayon (FSCA, WM 4513.01001–4).

Etymology.—This species is named in honor of Dr L.F. Armas, collector of part of the type series, for his contribution to Central American arachnology.

Diagnosis.—Epigean species smaller than *P. muchmorei*, 1.82–2.63 mm in length. Ped-



Figures 33–37.—*Pseudalbiorix armasi* Barba & Pérez, new species, paratype male from Luis Lazo (FSCA, WM 4513.01001), unless stated otherwise: 33. Left chela, lateral view, setae omitted; 34. Detail of teeth from fixed finger; 35. Right chela, lateral view, tritonymph from Luis Lazo (FSCA, WM 4513.01004); 36. Right pedipalp, dorsal view; 37. Detail of distal end of left tarsus IV. Scale lines = 0.2 mm (Fig. 35), 0.5 mm (Figs. 31, 36), 0.05 mm (Fig. 37).

ipalps with chela (without pedicel) 1.14–1.68 mm long. Movable finger of pedipalpal chela with 26–28 short marginal teeth, distal ones rounded without cusps, proximal ones much flattened.

Description.—*Adult:* Carapace and palps dark brown, other parts much lighter. Setae long, straight and acicular.

Pedipalp (Fig. 36): femur medially granulated, trochanter and patella with small granules, other surfaces smooth; trochanter 1.84–2.32, femur 3.43–4.45, patella 2.50–2.97, chela (without pedicel) 3.47–4.20, hand 1.56–2.00 times longer than deep, movable finger 1.24–1.44 times longer than hand. Fixed chelal finger with 20 trichobothria, movable chelal finger with 10 trichobothria (Fig. 33): *eb, esb* and *isb* in straight row at base of finger; *eb, esb, isb, it* and *et* regions each with 1 trichobothrium; *ib* region with 4 trichobothria; *ist* region with 5 trichobothria; *est* region with 6 trichobothria; *et* slightly distal to *it*; *b* region with 2 trichobothria; *sb* and *st* regions each with 1 trichobothrium; *t* region with 6 trichobothria. Venom apparatus present in both chelal fingers, venom duct terminating in nodus ramosus near *est* region in fixed finger and near basal section of *t* region in movable finger. Chelal hand with externo-distal condyle enlarged and slightly bifurcate. Chelal teeth evenly spaced: fixed finger (Fig. 34) with 46–47 large, long, acutely conical teeth; movable finger with 26–28 teeth, rounded distally and more flattened basally.

Chelicera: with 7 setae on hand; movable finger with 1 subdistal seta; galea very slender

and elongate; fingers with 4–8 small teeth; flagellum of 4 blades, each with several serrations; lamina exterior absent.

Cephalothorax: carapace longer than broad; lateral margins evenly convex; surface reticulated; with 2 small bulging eyes; with small epistome; with ca. 29 setae, including 4 setae on anterior margin and 4 on posterior margin; without furrows. Pedipalpal coxa with 2 apical setae, apex somewhat pointed.

Abdomen: tergites not divided, anterior tergites finely reticulated, others smooth; sternites III–VIII with very thin medial suture line; sclerites uniseriate. Tergal chaetotaxy: holotype ♂, 2: 2: 6: 6: 9: 9–10: 9–10: 9–10: 12: 8–9: 8–9: 2; paratype ♀: 2: 4: 5: 5: 6: 8: 8: 8: 8:? :? : 2. Sternal chaetotaxy: holotype ♂, 10: (1)8[3+3](1): (2)8(2): 11: 11: 13: 14: 13: 15:? : 2; paratype ♀: 9:? : (2)4(2): 8: 10: 10: 10: 12: 12:? : 2.; setae of anterior genital operculum (sternite II) of ♀ small. Setae of tergites and sternites IX–XI acuminate; with several tactile setae.

Genitalia of male with small dorsal apodeme, median genital sac not visible in material examined; genitalia of female with large gonosac which is covered with scattered pores.

Legs: leg I with femur 2.0–2.25 times longer than patella; femur+patella 1.58–2.60 times longer than broad; tibia 3.60–4.60 times longer than deep; subterminal tarsal setae trifurcate on legs I and II, and bifid on legs III and IV; metatarsus IV with single subproximal tactile seta; arolium longer than claws (Fig. 37), not divided but slightly indented at middle and with distal ventral margins fringed.

Tritonymph: Pedipalps: trochanter 2.02, femur 3.37, patella 2.56, chela (with pedicel) 3.87, chela (without pedicel) 3.72 times longer than broad. Fixed finger with 14 trichobothria, movable finger with 8 trichobothria (Fig. 35); *eb, esb, it* and *et* regions each with 1 trichobothrium; *ib* region with 3 trichobothria; *ist* region with 3 trichobothria; *est* region with 4 trichobothria; *et* adjacent to *it*; *b* region with 2 trichobothria; *st* region with 1 trichobothrium; *t* region with 5 trichobothria. Chelal hand with externo-distal condyle enlarged and bifurcate.

Chelicera: galea long, slightly curved; hand with 6 setae, movable finger with 1 seta; fixed finger with 3 small teeth and moveable finger with 5 small teeth; flagellum composed of 4 blades, all serrate.

Cephalothorax: carapace: very small epistome present; one pair of small eyes present; with 4 setae on anterior margin and 2 setae on posterior margin.

Legs: metatarsus and tarsus not fused; arolium longer than claws, not divided.

Dimensions (mm).—holotype male, followed by 8 paratypes. Body length 2.04 (1.82–2.63). Carapace length 0.64 (0.62–0.76). Chelicera 0.30/0.14 (0.29–0.40/0.14–0.20). Pedipalps: trochanter 0.34/0.17 (0.32–0.44/0.14–0.20), femur 0.88/0.20 (0.68–1.03/0.18–0.24), patella 0.50/0.20 (0.48–0.64/0.18–0.23), chela (without pedicel) 1.28/0.32 (1.14–1.68/0.30–0.42), hand (without pedicel) 0.54/0.30 (0.50–0.74/0.27–0.40), pedicel length 0.06 (0.06–0.08), movable finger length 0.78 (0.72–1.06). Leg I: femur 0.36/0.10 (0.33–0.48/0.10–0.12), patella 0.16/0.09 (0.16–0.22/0.09–0.11), tibia 0.24/0.06 (0.22–0.30/0.06–0.08), metatarsus 0.18/0.06 (0.15–0.24/0.04–0.06), tarsus 0.27/0.04 (0.23–0.31/0.04–0.05). Leg IV: femur+patella 0.60/0.38 (0.56–0.78/0.28–0.38), tibia 0.36/0.10 (0.36–0.48/0.10–0.12), metatarsus 0.21/0.09 (0.18–0.30/0.06–0.08), tarsus 0.33/0.04 (0.30–0.40/0.04–0.06).

Tritonymph: Paratype from Luis Lazo (FSCA, WM 4513.01004: Body length 1.74. Pedipalps: trochanter 0.269/0.133, femur 0.576/0.171, patella 0.389/0.152, chela (with pedicel) 1.033/0.267, chela (without pedicel) 0.992, hand length (without pedicel) 0.442, movable finger length 0.570. Carapace 0.531/0.461.

Remarks.—This species is known from Sierra de los Órganos and Sierra del Rosario, Pinar del Río Province, Cuba (Fig. 2), where it has been collected from under stones in evergreen forests.

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